Nova Scotia Health

CardioVascular HEALTH NOVA SCOTIA Bulletin

IMPROVING CARDIOVASCULAR HEALTH OF NOVA SCOTIANS

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Welcome to the Cardiovascular Health Nova Scotia (CVHNS) e-mail bulletin. The Bulletin has been created to share information about the program's activities, related cardiovascular health initiatives, and ideas from around the province. The Bulletin is published quarterly.

Transient Ischemic Attack: Taking Another Look

Dr. Gord Gubitz, Stroke Neurologist

The traditional definition of a transient ischemic attack (TIA) was developed years ago, with criteria including a focal episode (usually) of neurological dysfunction, related to a short-lived interruption of arterial blood supply to a part of the brain, lasting for less than 60 minutes and followed by a complete recovery. This definition has come under scrutiny lately, as it is now understood that the majority of TIAs last less than ten minutes. In addition, neuroimaging with MRI scanning has shown that up to one third of people with the traditional definition of TIA, and with no focal findings on neurological examination, actually have a small stroke visible on their brain scans.

These changes in the way that TIAs are being described parallel changes in the way that clinicians are treating patients presenting with TIA. It is now apparent that TIAs should be viewed with a tremendous sense of urgency; indeed, stroke experts view TIAs as the "unstable angina of the brain". This shift in thinking has taken place for several reasons. First, recent research, some of which has been undertaken in Canada, has changed the way that we view stroke risk after TIA. Traditional estimates have suggested that the 30 day risk of stroke following a TIA was on the order of 3 to 5%. We now know that the actual risk is much higher, about 10 to 15%. Other newer data indicate that the risk for subsequent stroke is highest within the first 48 hours after TIA.

Such information has necessitated a shift in the way that people with TIA are managed. There are four steps that, if undertaken consistently, may help to ensure that patients at highest risk for subsequent stroke are identified, and can then be appropriately managed:

1. Consider TIA as a diagnostic option. This can be difficult, as symptoms are often brief and non-specific. Major 'red flags' include lateralizing motor symptoms, and / or speech disturbance lasting more than ten minutes in a patient over 60 years of age with vascular risk factors (especially diabetes).

2. Obtain an ECG to rule out atrial fibrillation; in appropriate patients, long-term anticoagulation will need to be considered.
3. Arrange an urgent un-enhanced CT head scan to rule out TIA mimics (such as brain tumours), and to look for evidence of previous ischemic change.
4. Arrange an urgent carotid Doppler ultrasound to rule out internal carotid artery stenosis (in some places, it may be possible to arrange a CT angiogram at the same time as the CT head scan, provided renal function is normal). Ideally, carotid endarterectomy for patients with symptomatic stenosis should be performed within two weeks of symptom onset, although benefit for some patients is seen up to twelve weeks after symptoms.

According to recently published Canadian Guidelines for stroke (available at http://www.canadianstrokestrategy.ca), this work-up for TIA should be obtained ASAP (i.e. within 24 to 48 hours), but the degree of urgency may be tempered by the length of time since the patient experienced the TIA symptoms.

Finally, all people with TIA are by definition at the highest level of vascular risk, and so particular attention should be paid to treating hypertension, dyslipidemia, diabetes and smoking, as well as to ensuring that antithrombotic therapy has been initiated. Details regarding therapeutic targets are also available at http://www.canadianstrokestrategy.ca.

Learning Opportunities

Upcoming Events

Best Practices in Stroke Care: The First 72 hours
The Montreal Stroke Network, May 30, 2007
Montreal, QC
Elizabeth.shore@muhc.mcgill.ca

Emergency CV Care 2007: Strategies for Building Regional Integrated STEMI Systems for Reperfusion
June 1-2, 2007, Washington, DC
http://emessaging.vertecommunication.com

National Obesity Preceptorship
June 11, 2007, Halifax, NS
www.con-event3.ca

Canadian Council of Cardiovascular Nurses Meeting
June 22 (evening)-June 23, 2007
dugconsulting@hotmail.com or 902-488-6900

National Stroke Conference: Canadian Stroke Consortium & Canadian Stroke Network
September 15-16, 2007, Calgary, AB
strokeconsortium@on.aibn.com

Global Perspectives on Chronic Disease: Prevention and Management
October 29-November 1, 2007, Calgary, AB
www.cdmcalgary.ca

CME Programs by Specialty
Visit www.medscape.com for cardiology and neurology news, debates, resources and CMEs

CVHNS – Working Groups

ACS Best Practices Working Group

On March 6, 2007, a STEMI Acute Coronary Syndrome consensus forum was held in Halifax. This forum followed a process similar to the NSTEMI consensus forum held in November 2006. A cardiologist or internist was invited from each district health authority to participate in the day. The goal was to develop recommendations for components of management of STEMI namely, anti-thrombin therapy, secondary preventive therapies and risk stratification for rescue PCI and cardiac catheterization. Participants were also asked for their opinion on the best reperfusion method for patients in Metro Halifax. Consensus was achieved on several issues and advice provided regarding next steps for determining the best reperfusion method in Metro and risk stratification for cardiac catheterization. The draft guidelines for NSTEMI and STEMI were presented at ACCC in April and the combined draft guidelines will be circulated for review this summer. If you are interested in being a reviewer contact us at cvhns@cdha.nshealth.ca. It is anticipated that the guidelines will be ready for release this Fall.

Stroke Care Working Groups

In January 2007, the stroke rehabilitation working group held a two day retreat to incorporate the stroke rehabilitation best practices into the acute stroke guidelines that were circulated for feedback in the summer of 2006. As a result a combined set of provincial stroke care guidelines will be available by the end of June for further feedback. If you are interested in reviewing the guidelines, contact Corinne Corning at corinne.corning@cdha.nshealth.ca.

CBDHA Blood Pressure Screening Initiative

As a health promotion initiative inspired for February Heart Month, an ad hoc committee was formed at CBDHA to increase employee awareness about blood pressure. The committee brainstormed a plan to screen as many employees as possible within the district. Key champions were identified and contacted at each of the nine hospital sites including continuing care and rehabilitation facilities, Public Health and Addiction Services. Packages of information about the initiative including promotional flyers, references for target blood pressures, screening records, and information handouts were sent out.

In total, 1042 hospital employees were screened (16.2% males; 83.8% females), representing 34.7% of the district's staff. Of those screened, 186 individuals (6.2% of the total staff and 17.9% of the sample) exceeded the *maximum* hypertension target of less than 140/90 mmHg as recommended by the Canadian Hypertension Society. Limitations for the total percentage exceeding target levels included a lack of available data about absence or presence of diabetes and/or kidney disease states.

According to the Canadian Hypertension Society, 22% of adult Canadians between the ages of 18 and 70 are known to have hypertension. This random sample falls slightly below the national average. Further district screening may help reduce the overall incidence of hypertension in the district. For further information contact Laurie Forrest at (902) 567-8000.

Helpful Resources

Joint Statement on Drug Eluting Stents
Love MP, Schampaert E, Cohen EA et al. The Canadian Association of Interventional Cardiology and the CCS joint statement on drug-eluting stents. *Canadian Journal of Cardiology*. 2007; 23(2):121-123.

Guidelines on the Management and Prevention of Obesity in Adults and Children
The 2006 Canadian Clinical Practice Guidelines on the Management of Obesity in Adults and Children were just released. Visit www.cmaj.ca/pressrelease/pgS1-complete.pdf.

The Canadian diet–10 main sources of sodium accounted for over half (55%) of all sodium consumed:

- Pizza, sandwiches, submarines, hamburgers and hotdogs
- Soups
- Pasta
- Liquid milk and milk-based beverages
- Poultry and poultry dishes
- Potatoes
- Cheese
- Cereals
- Beef
- Sauces

Source: Garriguel, D. *Sodium Consumption at all ages*. Retrieved from: www.statcan.ca April 24, 2007.

Cholesterol and Diabetes
Visit www.diabetes.ca and click on Nutrition Guidelines, Tools and Resources to obtain a copy of the new Cholesterol and Diabetes patient handout developed by the National Nutrition Committee of the Canadian Diabetes Association.

Statistics Canada Report: Sodium-Consumption at All Ages
Statistics Canada has released this report based on data from the 2004 Canadian Community Health Survey (CCHS)-Nutrition. Visit www.statcan.ca/english/freepub/82-003-XIE/2006004/articles/sodium/sodiumconsumption_e.pdf.

Heart Failure Pocket Reference Card
The CCS Heart Failure Consensus conference Recommendation Program has recently released a heart failure pocket reference card. Visit www.hfcc.ca/educational_tools/index.aspx#pocketCard or request by e-mail hfcc@ccs.ca.

Evidence Based Guidelines for Cardiovascular Disease Prevention in Women
The AHA has released a 2007 update of guidelines for cardiovascular disease prevention in women. Visit www.acc.org/qualtiyandscience/clinical/pdfs/cvdinwomen.pdf.

Stroke Nursing News
The National Stroke Nursing Council (NSNC) produces a newsletter called Stroke Nursing News which is available at www.canadianstrokenetwork.ca. For further information about the council contact the Nova Scotia representative michelle.mackay@cdha.nshealth.ca.

Innovative Ideas

Dyslipidemia Module

The Diabetes Care Program of Nova Scotia recently developed a dyslipidemia module that will be used in Diabetes Education Centres to standardize teaching and educational tools used by health care professionals. The first section of the module provides a general overview of heart disease, dyslipidemia and how to control blood lipids. The second section covers how to lower blood fat levels through diet, activity and use of medications. The module includes a list of cholesterol medications, personal cholesterol record with targets, CDA's new Cholesterol and Diabetes handout as well as a list of helpful community resources. For further information contact dcpns@diabetescareprogram.ns.ca.

Stroke Strategy at AVH

The first meeting of the newly formed Annapolis Valley Health (AVH) Stroke Strategy focus group occurred in December 2006. The purpose of the initial meeting was to explore the need for changes in AVH based on the recently released *2006 Canadian Best Practice Recommendations for Stroke Care*. Because stroke/TIA patients and their families are supported by many disciplines within the health care team, it was decided that a coordinated, multidisciplinary approach was needed to provide the best possible care and outcomes. The focus group included representatives from Emergency Health Services, occupational therapy, physiotherapy, speech and language, nursing, pharmacy, dietary and medical staff and management.

The group agreed that process mapping would be the best way to identify gaps and improve care for Stroke/TIA patients in our district. Process Mapping is the step-by-step schematic drawing of a process in which boxes show the steps in the procedure, arrows indicate the flow, and symbols have specific meanings to help you understand the process. The next two meetings were devoted to "process mapping" stroke/TIA patients from and between all three acute care facilities within AVH. The process started when patients accessed the health care system from their home, and ended when they were discharged. During this process it soon became evident that individually we lacked knowledge and appreciation of how each discipline contributed to care of stroke patients.

After completing the process mapping and reviewing the *2006 Canadian Best Practice Recommendations for Stroke Care*, gaps were identified including the need for current protocols, assessment tools and care maps. Other gaps included lack of regular assessment and management of the stroke patient who is at high risk for depression. We have since added a psychologist to our group.

Following the initial exercise of process mapping, the stroke focus group members now have a deeper appreciation of the need for a coordinated and collaborative approach to care of stroke/TIA patients in AVH if best possible outcomes are to be achieved. Process mapping will continue to be an important tool to help us understand the clinical care process and plan sustainable changes that will favorably impact stroke patients and their families in this district. For further information contact Glenda O'Reilly at ICGO@icons.qe2-hsc.ns.ca or Deb Mander dmander@avdha.nshealth.ca.

Stroke Professional Education Focus Groups
Focus groups were held in 8 of the 9 provincial DHAs between February and April 2007. These groups were held to ascertain the knowledge and skills required by health care providers to implement best practice recommendations. The key contact person in each participating DHA will receive a summary report on the preliminary findings to share with focus group participants. A final report outlining findings and plans for professional education projects will be sent out at a later date. Heart & Stroke Foundation of Nova Scotia is doing this project in partnership with CVHNS and the Atlantic Health Promotion Research Centre. For further information contact Tina Tucker at ttucker@heartandstroke.ns.ca.

Your Questions Answered

Now that we are regularly assessing troponin levels, is it still necessary to check CK levels?
Yes, CK is helpful in giving an idea of the size of the infarct. It is recommended that CK be done on admission, between 10 to 12 hours and 24 hours later. There is no need to continue beyond 24 hours if symptoms have settled. However, if symptoms recur during the hospital stay, repeating CK levels is recommended. In case of recurrent symptoms, troponin would be less helpful because the level of troponin, if elevated on admission, remains elevated for several days.

Should we be teaching our MI patients to take one nitroglycerin or three nitroglycerin five minutes apart for chest pain before going to the emergency room?

The current Canadian recommendation is to teach the patient to take three nitroglycerin five minutes apart for chest pain before going to the emergency room.

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